

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A multiplexer for packetizing a plurality of encoded data streams, the multiplexer comprising:

means for inserting a time stamp ~~required to be used~~ for ~~[[the]]~~ reproduction of the encoded data streams into ~~these packets~~ a first packet;

means for multiplexing ~~said packets~~ a second packet packetized from the first packet;

means for detecting the number of skipped frames from the encoded data stream; and

means for generating a time stamp ~~which is to be inserted into the packets~~ first packet of the encoded data stream on the basis of the detected number of skipped frames.

2. (Original) The multiplexer according to claim 1, wherein the number of skipped frames is detected on the basis of the time difference between a current frame of the encoded data stream and a past frames prior to the current frame.

3. (Original) The multiplexer according to claim 2, wherein said means for detecting detects a first local time stamp added to the current frame of the encoded data

stream and a second local time stamp added to the past frame prior to the current frame.

4. (Original) The multiplexer according to claim 1, wherein said means for detecting further includes means for determining whether or not the encoded data stream includes frame skips; and the number of skipped frame are detected only in the case where said means for determining determines that the data streams include frame skips.

5. (Currently Amended) A multiplexer comprising:

means for packetizing an encoded video stream encoded by ~~the encode scheme regulated with MPEG-4~~ an MPEG-4 standard encoder and an encoded media stream having time correlation with the encoded video stream[[,]] ;

means for inserting a time stamp ~~required to be used~~ for ~~[[the]]~~ reproduction of the encoded video stream into ~~these packets~~ a first packet;

means for multiplexing ~~said packets~~ a second packet packetized from the first packet;

means for detecting the number of skipped frames from the encoded video stream; and

means for generating a time stamp ~~which is~~ to be inserted into the ~~packets~~ first packet of the encoded data stream, on the basis of the detected number of skipped frames.

6. (Currently Amended) A multimedia communication apparatus comprising:

- means for individually encoding a plurality of media streams having time correlation to output encoded media streams respectively;
- means for packetizing respectively said encoded media streams to create a first packet;
- means for detecting the number of skipped frames from the encoded media streams;
- means for generating a time stamp on the basis of the number of detected skipped frames;
- means for inserting the time stamp into the first packet ~~a packet header of the encoded media streams~~;
- means for multiplexing a second packet packetized from the first packet ~~packets of said encoded media streams so as~~ to output transmission streams; and
- means for transmitting the transmission streams to a transmission channel.

7. (Original) The multimedia communication apparatus according to claim 6, wherein said means for detecting detects the number of skipped frames on the basis of the time difference between a current frame of the coded media streams and the past frames prior to the current frame.

8. (Original) The multimedia communication apparatus according to claim 7, wherein said means for detecting detects the time difference on the basis of a first local

time stamp added to the current frame of the encoded media streams and a second local time stamp added to the past frame prior to the current frame.

9. (Original) The multimedia communication apparatus according to claim 6, wherein said means for detecting further comprises means for determining whether or not the encoded media stream include a frame skip and the number of skipped frames is detected only in the case where the means for determining determines that the frame skip is included.

10 (Currently Amended) A multimedia communication apparatus comprising:
first encode means for encoding a video stream in accordance with an ~~encode~~
~~scheme regulated with MPEG-4~~ MPEG-4 standard encoder to output an encoded video stream;

second encode means for ~~other~~ encoding a media stream, different from the video stream, having time correlation with the video stream to output an encoded media stream;

packetizing means for packetizing respectively the encoded video stream and the encoded media stream ~~output from said first and second encode means~~;

detecting means for detecting the number of skipped frames from the encoded video stream ~~output from said first encode means~~;

first time stamp generation means for generating a first time stamp on the basis of the number of skipped frames detected by said detecting means and inserting the

first time stamp into ~~a packet header of~~ a first packet corresponding to the encoded video stream;

second time stamp generation means for generating a second time stamp from the encoded media stream output from the second encode means and inserting the second time stamp into ~~the packet header of~~ a second packet corresponding to the encoded media stream; and

multiplexing means for outputting transmission streams by multiplexing the first packet and the second packet ~~packets of the encoded video stream and encoded media stream generated by said packetizing means.~~

11. (Currently Amended) A method of generating a time stamp which is applied to a multiplexer, the method comprising the steps of:

packetizing a plurality of encoded data streams,

inserting a time stamp ~~required to be used for~~ required to be used for ~~[[the]]~~ reproduction of the encoded data streams into ~~the packets~~ a first packet;

multiplexing ~~the packets,~~ a second packet packetized from the first packet;

detecting the number of skipped frames from the encoded data streams; and

providing a time stamp ~~which is to be inserted into the packets~~ first packet of the encoded data streams on the basis of the number of skipped frames which have been detected.

12. (Original) The method for generating a time stamp according to claim 11, wherein the step of detecting the number of skipped frame includes the steps of:

determining a time difference between a current frame of the encoded information data streams and past frame prior to the current frame; and
detecting the number of skipped frames on the basis of the determined time difference.

13. (Original) The method for generating a time stamp according to claim 12, wherein the step of determining time difference in the step of detecting the number of skipped frame determines the time difference on the basis of a first local time stamp added to the current frame of the encoded data streams, and a second local time stamp added to the past frame prior to the current frame.

14. (Original) The method for generating a time stamp according to claim 11, wherein the step of detecting the number of skipped frame further includes the steps of:
determining whether or not the encoded data streams include frame skips; and
detecting the number of skipped frame only in the case where determination is made that the frame skips are included.

15. (Currently Amended) A method for generating a time stamp which is applied to a multiplexer, the method comprising the steps of:
packetizing an encoded video stream encoded ~~with an encode scheme regulated with MPEG-4~~ an MPEG-4 standard encoder and an encoded media stream having time correlation with the encoded video stream[[,]];

inserting a time stamp ~~required to be used~~ for ~~[[the]]~~ reproduction of the encoded video stream into ~~the packets~~ a first packet;
multiplexing ~~the packets~~ a second packet packetized from the first packet;
detecting the number of skipped frames from the encoded video stream; and
providing a time stamp ~~for inserting packets of the video stream~~ to be inserted into the first packet on the basis of the number of skipped frames which have been detected.

16. (New) A multimedia data encoding apparatus, comprising:
means for encoding multimedia data to generate encoded multimedia data;
first packetizing means for packetizing the encoded multimedia data into a first packet;
means for inserting a first time stamp to be used for reproduction of the multimedia data into the first packet;
means for detecting the number of skipped frames from the encoded multimedia data;
means for generating a second time stamp to be inserted into the first packet instead of the first time stamp on the basis of the detected number of skipped frames;
and
second packetizing means for packetizing the first packet into a second packet.

17. (New) The multimedia data encoding apparatus according to claim 16, wherein:

the encoded multimedia data includes a plurality of frames each having a local time stamp; and

the detecting means detects the number of skipped frames on the basis of a local time stamp of the current frame and a local time stamp of the past frame prior to the current frame.

18. (New) A multimedia data encoding apparatus, comprising:

means for encoding multimedia data to generate encoded multimedia data;

first packetizing means for packetizing the encoded multimedia data into a packetized elementary stream (PES) packet;

means for inserting a first time stamp to be used for reproduction of the multimedia data into the PES packet;

means for detecting the number of skipped frames from the encoded multimedia data;

means for generating a second time stamp to be inserted into the PES packet instead of the first time stamp on the basis of the detected number of skipped frames; and

second packetizing means for packetizing the PES packet into a transport stream (TS) packet.

19. (New) The multimedia data encoding apparatus according to claim 18,
wherein:

the encoded multimedia data includes a plurality of frames each having a local
time stamp; and

the detecting means detects the number of skipped frames on the basis of a local
time stamp of the current frame and a local time stamp of the past frame prior to the
current frame.